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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

FOX, CHARLES A

ART UNIT PAPER NUMBER

3652

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,090

Applicant(s)

GROND, JOHANN WALTER

Examiner

Charles A. Fox

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-23, 25-29, 31 and 33-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-23, 25-28, 31 and 33-37 is/are rejected.
- 7) ☒ Claim(s) 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 35 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant has defined the loading track as being along the front of the rack bays and the aisle ways being located between the rack bays. The new limitation of the aisle extending past the end of the rack bay and over the loading track is not possible as the loading track must be at the end of the rack bays and the aisle must be between the rack bays. It appears the applicant is wishing to place rails (16) above the loading track and that is how the claims are treated in the art rejections below. Clarification is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-23,25,26,28,31 and 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kita et al. in view of Becker et al. In regards to claims 21 and 36 Kita et al. US 5,002,449 teaches a method of storing and retrieving an article comprising the steps of:

transporting a load via a transport vehicle along a track to a vertical conveyor at the front of a rack bay;

removing the load from the transport device;

depositing the load onto the vertical conveyor;

transporting the load in a first vertical direction to a target rack height;

moving a transport device along a rack aisle to a position adjacent to said vertical conveyor and above the loading track;

removing the load from said vertical conveyor and placing said load onto a second transport device, via a lifting/pushing device;

transporting the load in a second horizontal direction down a rack aisle on guide elements associated with each rack level to a target rack location;

transporting said load in a third horizontal direction to deposit said load onto the target rack location via a lifting/pushing device wherein said load is capable of being raised over a small distance. Kita et al. do not teach providing the storage facility with multiple aisles between the rack bays. Becker et al. DE 1531898 teaches a method of storing a load comprising the steps of:

moving a load along a conveyor located at the front of a plurality of rack bays;

placing the load on one of a plurality of stationary vertical lifts;

wherein each lift is located at the front of a rack bay;

wherein said load may drive on said loading track at the front of rack bays to any given stationary vertical lift;

moving the load into a target rack location. It would have been obvious to one of ordinary skill in the art, at the time of invention to modify the methods taught by Kita et al. by providing multiple rack aisles as taught by Becker et al. in order to allow the device to store a greater amount of goods by providing more rack bays, and hence more rack aisles.

In regards to claim 22 Kita et al. further teach removing a load from a rack involves the steps of placing a load in the rack, with the steps ran in reverse order.

In regards to claim 23 Kita et al. further teach each of the transporting steps are carried out at an angle of 90° to the previous step.

In regards to claims 35 and 37 Kita et al teach a system for storing and retrieving loads comprising:

- a plurality of rack bays (2,3) wherein each bay has a plurality of levels and each level has a plurality of compartments;

- a loading track running along the front end of a first rack bay;

- a plurality of guide elements (7) for guiding a load transport at each aisle and each level of said aisle;

- a plurality of movable load transport devices (9') in said rack aisles for receiving and transporting a load;

- a stationary vertical conveyor (56) disposed at the end of a rack bay for raising a load to a predetermined level of said rack, wherein said vertical lift has at least one side coupled to a corresponding rack bay and a second side coupled to a corresponding rack aisle;

a lifting and pushing system for displacing the loads into and out of said rack compartments and said stationary vertical rack , wherein said transport devices has a lower zone. Kita et al. does not teach a plurality of rack aisles in said system with a plurality of vertical conveyors.

Becker et al. teaches a storage system comprising :

a plurality of rack bays;

a plurality of rack aisles between said rack bays;

a loading track extending across the front of said rack bays and said rack aisles;

vertical conveyors at the front of the rack bays and positioned above said loading track;

said vertical conveyors having floors that may be driven up and positioned above the loading track.

It would have been obvious to one of ordinary skill in the art, at the time of invention to modify the system taught by Kita et al. by providing multiple rack aisles as taught by Becker et al. in order to allow the device to store a greater amount of goods by providing more rack bays, and hence more rack aisles.

In regards to claim 25 Kita et al. further teach that the system for pushing the load into the rack is a lifting and pushing system.

In regards to claim 26 Kita et al. also teach that the vertical conveyor lifts the loads to a predetermined height where the load is placed on a transport device (9') dedicated to that rack height.

In regards to claim 28 Kita et al. further teach that the vertical conveyor and said transport devices can be driven by pulling systems.

In regards to claim 31 Kita et al. further teach the transport devices as having rollers (23a,23b) having a running surface adapted to the shape of the guide element (7).

In regards to claims 33 and 34 Kita et al. also teach the lifting/pushing mechanism comprising running wheels (23a,23b) in a lower zone, wherein loads can be raised against the floor of said transport device (9'), wherein a plurality of lifting bars are disposed adjacent to said wheels.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kita et al. and Becker et al. as applied to claim 35 above, and further in view of Burt. Kita et al. and Becker et al. teach the limitations of claim 35 as above they do not teach transverse struts across the aisle ways. Burt US 4,428,708 teaches a storage system comprising:

a plurality of rack bays;

transverse support structures (43) spanning the aisles between said bays.

It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the system taught by Kita et al. and Becker et al. with transverse supports as taught by Burt in order to rigidify the overall structure.

Response to Amendment

The amendments to the claims filed on June 24, 2004 have been entered into the record.

Allowable Subject Matter

Claim 29 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The closest prior art of Kita et al. does not teach or suggest placing two transport devices at each vertical level of the rack system.

Response to Arguments

Applicant's arguments filed June 24, 2004 have been fully considered but they are not persuasive. In regards to the new limitation in the claims of a transport vehicle being moved above a loading track, Kita et al. teach this step. To load the lowermost bay opposite the vertical conveyor some sort of load track must be employed to move the load. Thus the rails (7) for the upper levels of the racks will extend over the loading track for the first level, or for that matter any level below the tracks in question. Therefore the examiner holds that the new limitations do not distinguish over the cited prior art.

In regards to the motivation to combine the references the Kita et al. reference teaches using their system to utilize available space, and the Becker et al. reference teaches filling up a warehouse with a plurality of rack bays and associated rack aisles therebetween. One of ordinary skill in the art would appreciate the placement of the loading tracks across a plurality of rack bays and that the device taught by Kita et al. could be extended to more rack bays to make use of available space. Thus the references are properly combined and the rejections stand as before.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Fox whose telephone number is 703-605-4294. The examiner can normally be reached between 7:00-5:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached at 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CAF
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10-18-04


DEAN J. KRAMER
PRIMARY EXAMINER